

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 8**REMARKS/ARGUMENTS****Status of the Claims**

Claims 4, 15, 16, 18-20, 23, and 31-36 have been canceled without prejudice or disclaimer. These claims were withdrawn from consideration in the Office Action for being drawn to non-elected subject matter. In addition, claim 9 has been canceled without prejudice or disclaimer for the reason set forth below. Applicants expressly reserve the right to file continuing applications or take such other appropriate measures deemed necessary to protect the subject matter of the canceled claims.

Claims 1, 5, 12, 21, 24, and 30 have been amended. The amendments are described in detail below.

In the interest of furthering prosecution, parts (c) and (d) of claims 1, 5, 21, and 30 have been amended. As amended, part (c) recites that the nucleotide sequence comprises at least 90% sequence identity to the sequence set forth in SEQ ID NO: 1 and encodes a polypeptide having acyl-CoA thioesterase activity. As amended, part (d) recites that the nucleotide sequence comprises at least 200 contiguous bases of the nucleotide sequence set forth in SEQ ID NO: 1. Applicants expressly reserve the right to file continuing applications or take such other appropriate measures deemed necessary to protect the subject matter of parts (c) and (d) of original claims 1, 5, 21, and 30. Support for the amendment of parts (c) and (d) of claims 1, 5, 21 and 30 can be found in original claims 1, 5, 21, and 30 and throughout the specification, particularly on pages 13 (lines 11-22) and 14 (lines 1-14).

Part (e) of claim 1 has also been amended to point out more distinctly that subject matter of this part. As amended, part (e) reads as follows "the nucleotide sequence that is complementary to the nucleotide sequence of (a), (b), or (c)." Support for this amendment to claim 1 can be found throughout the specification, particularly page 25.

Parts (e) and (f) of claims 5, 21, and 30 have been deleted for being drawn to non-elected subject matter. Applicants expressly reserve the right to file divisional applications or take such

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 9

other appropriate measures deemed necessary to protect the subject matter of canceled parts (e) and (f). In addition, part (g) of these claims has been amended to point out more distinctly that the subject matter to which this part is directed. As amended, part (g) [now part (e) due to the deletion of parts (e) and (f)] reads as follows: "the nucleotide sequence that is complementary to the nucleotide sequence of (a), (b), or (c)." Support for this amendment to the claims can be found in the specification, particularly on page 25.

Claim 5 has been amended to clarify the subject matter of the claim. In particular, the claim has been amended to indicate that the nucleotide construct comprises a promoter operably linked to an acyl-CoA thioesterase nucleotide sequence, wherein said promoter drives expression in a plant cell. Support for this amendment to claim 5 can be found in original claim 9 and throughout the specification.

Claim 5 has been amended to point out more distinctly that the level of oil or an oil constituent is increased in the plant or a part thereof. As amended, claim 5 recites that "the level of oil or the level of at least one oil constituent is increased in said plant or at least one part of said plant, said part selected from the group consisting of a fruit, a seed, and an embryo." Support for this amendment to claim 5 can be found in original claim 7, the Abstract, and in the specification, particularly on pages 5, 8, and 38.

Claim 12 has been amended to delete the "of" that immediately follows "group". Due to a clerical error, Applicants inadvertently included this word in claim 12. This amendment is formal in nature and is not intended to limit the scope of the claim.

Claims 21 and 30 have been amended to clarify that Applicants claimed invention can be used to decrease or increase the level of acyl-CoA thioesterase in a plant. These claims have been amended by deleting "said" from the recitation "wherein the level of said acyl-CoA thioesterase is decreased or increased". As amended, claims 21 and 30 recite: "wherein the level of acyl-CoA thioesterase is decreased or increased". Support for the amendment to claims 21 and 30 can be found in the specification, particularly on page 6 (lines 11-20).

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 10

Claim 21 has been amended to point out more distinctly that the decrease or increase in acyl-CoA thioesterase activity is in "said plant or at least one part of said plant, said part selected from the group consisting of a fruit, a seed, and an embryo." Support for this amendment to claim 21 can be found in original claim 7 and in the specification, particularly on page 5.

Claim 24 has been amended to point out more distinctly that the claimed plant produces at least one unusual fatty acyl chain in its seeds. Support for the amendment can be found in original claim 24 and in the specification, particularly on pages 7 (lines 22-24), 8 (lines 13-23), and 39 (lines 18-29).

No new matter has been added by way of amendment of the claims.

Reexamination and reconsideration of the application as amended are respectfully requested in view of the following remarks.

Claims 5-14, 17, 21-22, and 24-30 Are Free of the Prior Art

Applicants respectfully acknowledge that the Examiner has determined that "[c]laims 5-14, 17, 21-22, and 24-30 are deemed free of the prior art, given the failure of the prior art to teach or reasonably suggest an isolated polypeptide of SEQ ID NO: 1 and plants transformed with said polynucleotide." (Paper No. 16, p. 10)

The Rejections of the Claims Under 35 U.S.C. § 112, First Paragraph, Should Be Withdrawn

Claims 1-3, 5-14, 17, 21-22, and 24-30 have been rejected under 35 U.S.C. § 112, first paragraph. Claim 9 has been canceled. Claims 1, 5, 12, 21, 24, and 30 have been amended. This rejection is respectfully traversed.

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 11*Written Description*

Claims 1-3, 5-14, 17, 21-22, and 24-30 have been rejected under 35 U.S.C. § 112, first paragraph, for lack of adequate written description. The Office Action indicates that Applicants broadly claim a nucleotide sequence having at least 75% sequence identity to SEQ ID NO: 1. The Office Action further indicates that Applicants describe SEQ ID NO: 1 and SEQ ID NO: 2 but do not describe which 75% of the identity of SEQ ID No: 1 is required to encode an acyl-CoA thioesterase or fragment thereof. The Office Action asserts that, given the claim breadth and lack of guidance, the specification does not provide an adequate written description of the claimed invention. The Office Action further asserts that there are insufficient relevant identifying characteristics, based upon the disclosure of SEQ ID NO: 1, to allow one skilled in the art to determine the structure of nucleic acid fragments of SEQ ID NO: 1, other than SEQ ID NO: 1, that either increase or decrease the level of acyl-CoA thioesterase in a plant, including mutants and allelic variants, absent further guidance. In support of this position, the Office Action cites *Regents of the University of California v. Eli Lilly and Co.*, 43 U.S.P.Q.2d 1398 (Fed. Cir. 1997).

As described above, part (c) of claims 1, 5, 21, and 30 has been amended to recite that the nucleotide sequence has at least 90% identity to SEQ ID NO: 1 and encodes a polypeptide having acyl-CoA thioesterase activity. Part (d) of these same claims has been amended to recite that the nucleotide sequence encodes a polypeptide having acyl-CoA thioesterase activity, wherein said nucleotide sequence comprises at least 200 contiguous bases of the nucleotide sequence set forth in SEQ ID NO: 1.

As amended, claims 1, 5, 21, and 30, as *Lilly* requires, recite both the functional and structural features of the claimed isolated nucleotide sequences. As amended, claims 1, 5, 21, and 30 recite that the fragment and variant nucleotide sequences encode polypeptides having acyl-CoA thioesterase activity or are the complements of such nucleotide sequences. The specification provides adequate description of the subject matter of the amended claims and its dependent claims so as to reasonably convey to one skilled in the relevant art that Applicants had possession of the invention as claimed. In particular, the specification discloses on pages 12-15

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 12

that the invention encompasses fragments and variants of the disclosed nucleotide sequence, wherein such fragments and variants encode polypeptides that retain acyl-CoA thioesterase activity. Accordingly, the subject matter of amended claims 1, 5, 21, and 30 and their dependent claims is adequately described in the instant specification so as to reasonably convey to one of ordinary skill in the relevant art that, at the time of the invention, Applicants had possession of the claimed invention. The written description requirement of 35 U.S.C. §112, first paragraph, has been satisfied.

In summary, in view of the amendments and above remarks, claims 1-3, 5-14, 17, 21-22, and 24-30 satisfy the written description requirement of 35 U.S.C. §112, first paragraph, and the Examiner is respectfully requested to withdraw the rejection.

Enablement

Claims 1-3, 5-14, 17, 21-22, and 24-30 have been rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. The Office Action indicates that Applicants teach a method of decreasing β -oxidation in a plant by transforming the plant with a nucleotide sequence encoding a polypeptide having acyl-CoA thioesterase activity that comprises 24 contiguous nucleotides of SEQ ID NO: 1 and a nucleotide sequence having at least 75% sequence identity to SEQ ID NO: 1. The Office Action further indicates that Applicants teach that a cDNA from maize of SEQ ID NO: 1 is homologous to the yeast PTE gene. The Office Action asserts that Applicants do not teach plants comprising a nucleotide sequence encoding a polypeptide having acyl-CoA thioesterase activity that comprises 24 contiguous nucleotides of SEQ ID NO: 1; a nucleotide sequence having at least 75% sequence identity to SEQ ID NO: 1; or a polynucleotide of SEQ ID NO: 1. The Office Action concludes that the invention is not enabled and that undue experimentation is required to make and use Applicants' invention as claimed, given the unpredictability of the art as to which substitutions, deletions, or additions to SEQ ID NO: 1 will be tolerated and the lack of guidance in the examples of the specification or in the prior art.

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 13

As discussed above, part (c) of claims 1, 5, 21, and 30 has been amended to recite that the nucleotide sequence has at least 90% identity to SEQ ID NO: 1 and encodes polypeptide having acyl-CoA thioesterase activity. Part (d) of these same claims has been amended to recite that the nucleotide sequence encodes a polypeptide having acyl-CoA thioesterase activity, wherein said nucleotide sequence comprises at least 200 contiguous bases of the nucleotide sequence set forth in SEQ ID NO: 1.

In contrast to the conclusions of the Office Action, the specification provides sufficient guidance to make and identify the isolated nucleotide molecules encompassed by the claims. In particular, Applicants have provided the nucleotide sequence of SEQ ID NO: 1. The claimed nucleotide sequences vary from this sequence by structural parameters (*i.e.*, at least 90% identity to SEQ ID NO 1, or at least at least 200 contiguous bases of SEQ ID NO: 1) that can be determined by those of ordinary skill in the art. While methods for sequence alignments, sequence comparisons, and determining percent sequence identity are within the knowledge of one of ordinary skill in the art, additional guidance for is set forth in the specification on pages 19-24.

Moreover, the nucleotide sequences of the invention encode polypeptides having acyl-CoA thioesterase activity. Such nucleotide sequences include those that are fragments and variants of SEQ ID NO: 1 and that encode biologically functional acyl-CoA thioesterases. Methods for assaying whether the nucleotide sequences encode biologically functional acyl-CoA thioesterases are known in the art and are also provided in the instant specification on page 15 at lines 20-21. Accordingly, based on the guidance in the specification, one of ordinary skill in the art would be able to determine which nucleotide sequences are encompassed by the present invention.

The Federal Circuit has repeatedly stated that enablement is not precluded by the necessity for some experimentation, so long as the experimentation needed to practice the invention is not undue. *In re Wands* 8 U.S.P.Q.2d 1400 (Fed. Cir. 1988). Furthermore, a considerable amount of experimentation is permissible, if it is merely routine, or if the

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 14

specification provides a reasonable amount of guidance in which the experimentation should proceed. *Id.*

Applicants stress that when evaluating the quantity of experimentation required, the court looks to the amount of experimentation required to practice a single embodiment of the invention, rather than the amount required to practice every embodiment of the invention. For example, in *Wands*, the claims at issue were drawn to immunoassay methods using any monoclonal antibody having a binding affinity for HbsAg of at least 10^{-9} M. The USPTO had taken the position that the claim was not enabled as it would take undue experimentation to make the monoclonal antibodies required for the assay. The Federal Circuit reversed, and held that the claims were enabled, as the amount of experimentation required to isolate monoclonal antibodies and screen for those having the correct affinity was not undue. *Id.* Clearly, the Federal Circuit did not contemplate that every antibody useful in the methods of the claim must be identified. Rather, the court considered the amount of experimentation required to identify one or a few monoclonal antibodies having the required affinity.

In the instant case, the quantity of experimentation required to practice the invention amounts to two steps, identifying a nucleotide sequence that comprises at least 90% sequence identity to, or has at least 200 contiguous bases of, the nucleotide sequence of SEQ ID NO: 1, and then assaying the protein encoded thereby for functional activity. Thus, ample guidance is provided to allow one of skill in the art to identify additional nucleotide sequences encompassed by the claims 1, 5, 21, and 30 and their respective dependent claims. Consequently, contrary to the conclusions of the Office Action, the quantity of experimentation necessary and the amount of guidance presented in the specification is sufficient to enable Applicants' claimed invention. Accordingly, Applicants submit that claims 1-3, 5-14, 17, 21-22, and 24-30 are enabled under 35 U.S.C. §112, first paragraph.

The Office Action also asserts that claims 5-14, 17, 21-22, and 24-30 are not enabled because of the unpredictability of engineering a metabolic process in any higher organism such as a plant as is evidenced by the Eccleston *et al.* reference (*Plant Cell* (1998) 10:613-621). The Office Action indicates that the Eccleston *et al.* reference teaches that high levels of expression

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 15

of a thioesterase from California Bay in *Brassica napus* seeds had no effect on total oil content and limited laurate accumulation to 60% due to the regulation of the pathway of β -oxidation. The Office Action further asserts that given the unpredictability in the art as to what regulatory mechanisms would be permissive of genetic engineering, the breadth of the claims, and the lack of guidance, one would not know which embodiments would be inoperable. The Office Action concludes that trial and error would be needed by one skilled in the art to make a myriad of non-exemplified plants for expression of an acyl-CoA thioesterase polynucleotide to decrease β -oxidation and increase total oil or some unspecified component therein.

Applicants respectfully disagree that the Eccleston *et al.* reference supports the Office Action's assertion of unpredictability of the instant invention. Unlike the Eccleston *et al.* reference which teaches plants transformed with a nucleotide sequence encoding a lauryl-ACP thioesterase, Applicants' claimed invention is directed to nucleotide sequences encoding a polypeptide having acyl-CoA thioesterase activity, and plants and cells transformed with such nucleotide sequences. The lauryl-ACP thioesterase of the Eccleston *et al.* reference is involved in fatty acid biosynthesis. In contrast, acyl-CoA thioesterases that are encoded by the nucleotide sequences of the invention are homologues of the yeast PTE gene, which is known to encode a peroxisomal acyl-CoA thioesterase. Such peroxisomal acyl-CoA thioesterases are known to be involved in fatty acid degradation, particularly, β -oxidation, as is disclosed in the instant specification on, for example, pages 39-41. In fact, the instant specification discloses that the methods of the present invention find use in reducing β -oxidation in plants, like those disclosed in the Eccleston *et al.* reference, which have been genetically engineered to produce increased levels of a particular fatty acid in the plant or part thereof. *See*, pages 39-41 of the instant specification. Thus, the Eccleston *et al.* reference does not support the position of the Office Action that Applicants' claimed invention is not enabled.

Furthermore, for the reasons set forth in detail above, the quantity of experimentation required to practice the invention amounts to two steps, identifying a nucleotide sequence that comprises at least 90% sequence identity to, or has at least 200 contiguous bases of, the nucleotide sequence of SEQ ID NO: 1 and then assaying the protein encoded thereby for

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 16

functional activity. Thus, ample guidance is provided to allow one of skill in the art to identify additional nucleotide sequences encompassed by the claims 1, 5, 21, and 30 and their respective dependent claims. Consequently, contrary to the conclusions of the Office Action, the quantity of experimentation necessary and the amount of guidance presented in the specification is sufficient to enable Applicants' claimed invention. Accordingly, Applicants submit that claims 5-14, 17, 21-22, and 24-30 are enabled under 35 U.S.C. § 112, first paragraph.

In view of the amendments and above remarks, it is apparent that those of skill in the art would be able to practice the present claims without undue experimentation. Accordingly, the enablement rejection of claims 1-3, 5-14, 17, 21-22, and 24-30 should be withdrawn.

The Rejection of the Claim 13 under 35 U.S.C. § 112, Second Paragraph, Should Be Withdrawn

Claims 1-3, 5-14, 17, 21-22, and 24-30 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention. Claim 9 has been canceled. Claims 1, 5, 12, 21, 24, and 30 have been amended. This rejection is respectfully traversed.

The Office Action indicates that in claim 1 the phrase "a nucleotide sequence complementary to the nucleotide sequence" is indefinite because it is unclear if Applicants intend that the nucleotide sequence is complementary to the full-length of SEQ ID NO: 1 or only a part thereof. Applicants respectfully disagree with this position of the Office Action for one of ordinary skill in the art in view of the instant specification would fail to find the recited phrase as being indefinite. However, in the interest of furthering prosecution and not to limit the scope of their claimed invention, Applicants have amended part (e) of claim 1 to recite "the nucleotide sequence that is complementary to the nucleotide sequence of (a), (b), or (c)." In addition, Applicants have amended claims 5, 21, and 30 similarly. This amendment to claims 1, 5, 21, and 30 is purely formal in nature and is fully supported by the specification and original claims. As amended, claim 1 is not indefinite.

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 17

The Office Action indicates that claim 5 is indefinite for several reasons. First, the Office Action indicates that claim 5 is indefinite because there is no connection between the preamble "A method of decreasing β -oxidation in a plant" in line 1 and the recitation "wherein the level of oil or the level of at least one constituent of said oil is increased." Applicants have amended claim 5 to clarify the nucleotide construct comprises a promoter that drives expression in a plant cell operably linked to an acyl-CoA thioesterase nucleotide sequence of the invention. Thus, the connection between the parts is the expression an acyl-CoA thioesterase in the transformed plant or part thereof. Accordingly, amended claim 5 is not indefinite for lacking a connection between the two parts of the claim.

Second, the Office Action indicates that in claim 5 the recitation "an acyl-CoA thioesterase nucleotide sequence or fragment thereof" is indefinite. Applicants have deleted the recitation "or fragment thereof" from the claim because this recitation because it is redundant. The recitation "or fragment thereof" is redundant because parts (c), (d), and (g) of claim 5 also encompass such a fragment. Thus, this amendment to claim 5 is purely formal in nature and does not reduce the scope of the subject matter encompassed by the claim.

Third, the Office Action indicates that claim 5 is incomplete for lacking a regeneration step. Applicants respectfully disagree with the Office Action regarding the alleged incompleteness of the claim. One of ordinary skill in the art, in view of the instant specification, would recognize that regeneration is unnecessary in certain embodiments of the Applicants' claimed methods. Such embodiments can, for example, involve transforming a plant by contacting the plant with a virus or viral nucleic acids. Such transformation methods are disclosed in the instant specification on, for example, pages 4-5 and 34-35. Thus, claim 5 is not incomplete for lacking a regeneration step.

Fourth, the Office Action indicates that claim 5 is incomplete for not reciting an expression step. Applicants have amended claim 5 to recite that the "nucleotide construct comprises a promoter operably linked to an acyl-CoA thioesterase nucleotide sequence," and that "said promoter drives expression a plant cell." As amended, claim 5 is not indefinite for omitting an expression step.

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 18

Fifth, the Office Action indicates that the recitation of "at least one constituent of said oil" is indefinite. The Office Action indicates that "[i]t is unclear what is comprised by constituent." (Paper No. 16, p. 8) The Office Action also indicates that "[t]he term 'constituent' could refer to a non-oil constituent or an *oil constituent*." (Paper No. 16, p. 8) (emphasis added) Applicants have amended claim 5 to clarify that the method increases the level of oil or at least one *oil constituent*. As amended, claim 5 is not indefinite.

Sixth, the Office Action indicates that the term "part" as recited in claim 5 and also claim 21 is indefinite because it is unclear what is comprised by "part." Applicants have amended claims 5 and 21 to recite "at least one part of said plant, said part selected from the group consisting of a fruit, seed, and an embryo." As amended, claims 5 and 21 are not indefinite.

The Office Action indicates that in claim 9, after "expression", the word --in-- should be inserted. The cancellation of claim 9 has obviated this rejection.

The Office Action indicates that in claim 12, line 2, the word "of" should be deleted. Applicants have amended claim 12 to delete the "of" that immediately follows "group".

The Office Action indicates that, as used in claims 12 and 24, the word "unusual" is indefinite. The specification, however, sets forth on page 10 what Applicants intend by "unusual fatty acids" and constituents of oil comprising such "unusual fatty acids." Thus, in view of the instant specification, one of ordinary skill in the art would not find claims 12 and 24 to be indefinite for the recitation of "unusual" therein.

The Office Action indicates that in claims 21 and 30 the recitation "wherein the level of said acyl-CoA thioesterase is decreased or increased in said plant" is indefinite. The Office Action asserts that "[i]t is unclear if the 'said acyl-CoA thioesterase' recited at the end of the claim is the transgenic DNA recited at the beginning of the claims or not." (Paper No: 16, p. 9) The Office Action then poses the question "how could the level of 'said acyl-CoA thioesterase' be decreased if the nucleotide sequence of 21(g) i.e. antisense is comprised in the construct?" (Paper No: 16, p. 9)

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 19

As disclosed in the instant specification, Applicants' claimed invention involves sense and antisense suppression methods that were known in the art at the time of Applicants' invention. Such sense and antisense suppression methods can be used to decrease in an organism, or any cell thereof, the level of particular *proteins*, including enzymes such as, for example, acyl-CoA thioesterases. While Applicants do not believe that claims 1 and 30 are indefinite because of the recitation of "said acyl-CoA thioesterase", Applicants, in the interest of furthering prosecution, have amended claims 21 and 30 to omit the "said" that is immediately before "acyl-CoA thioesterase". As amended, claims 21 and 30 are not indefinite.

The Office Action indicates that claim 24 is indefinite because the recitation "capable of producing" suggests that the plant may or may not produce. Applicants have amended claim 24 to replace recite that the plant produces at least one unusual fatty acyl chain in its seeds. As amended, claim 24 is not indefinite.

In view of the amendment and remarks, it is submitted that the rejection under 35 U.S.C. § 112, second paragraph, should be withdrawn.

The Rejection of the Claims Under 35 U.S.C. § 102(b) Should Be Withdrawn

Claims 1-3 have been rejected under 35 U.S.C. § 102(b). Claim 1 has been amended. This rejection is respectfully traversed and should not be applied to the newly submitted claims.

Claim 1 has been rejected under 35 U.S.C. § 102(b) as being anticipated by Walbot (GenBank Accession No. AI600977). The Office Action indicates that claim 1 is indefinite as discussed *supra*. The Office Action also indicates that Walbot teaches an EST that 99% sequence identity to SEQ ID NO: 1 of the instant invention.

Claim 1, particularly part (c), therein has been amended to point out more distinctly that claim 1 is directed to "a nucleotide sequence comprising at least 90% identity to the nucleotide sequence set forth in SEQ ID NO: 1, wherein said nucleotide sequence encodes a polypeptide having acyl-CoA thioesterase activity." Walbot fails to teach that the EST of GenBank

RTA01/2148179v1

Appl. No.: 09/899,645

Filed: July 5, 2001

Page 20

Accession No. AT600977 comprises a nucleotide sequence that encodes a polypeptide having acyl-CoA thioesterase activity. Accordingly, Walbot does not anticipate amended claim 1.

Claims 1-3 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Gordon-Kamm *et al.* (*Plant Cell* (1990) 2:630-618). The Office Action indicates that claims 1-3 are indefinite as discussed *supra*. The Office Action then indicates that Gordon-Kamm *et al.* teaches an expression vector comprising the GUS gene driven by the CaMV 35S promoter. The Office Action further indicates that the GUS gene comprises an adenine nucleotide that is complementary to any one of the thymidine nucleotides of SEQ ID NO: 1.

As discussed above, part (e) of claim 1 has been amended to recite "the nucleotide sequence that is complementary to the nucleotide sequence of (a), (b), or (c)." As amended, claim 1 is not indefinite. Thus, the GUS gene as disclosed in Gordon-Kamm *et al.* is not encompassed by the amended claim. Accordingly, Gordon-Kamm *et al.* does not anticipate claim 1 and dependent claims 2 and 3.

In view of the amendments and remarks, it is submitted that the rejection of claims 1-3 under 35 U.S.C. § 102(b) should be withdrawn.

CONCLUSION

In view of the above amendments and remarks, Applicants submit that the rejections of the claims under 35 U.S.C. §§ 102 and 112 are overcome. Applicants respectfully submit that this application is now in condition for allowance. Early notice to this effect is solicited.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

RTA01/21J8179v1

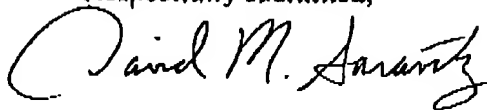
Appl. No.: 09/899,645

Filed: July 5, 2001

Page 21

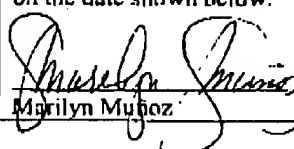
therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



David M. Saravitz

Provisional Registration No. P-55,593

Customer No. 29122 ALSTON & BIRD LLP Bank of America Plaza 101 South Tryon Street, Suite 4000 Charlotte, NC 28280-4000 Tel Raleigh Office (919) 862-2200 Fax Raleigh Office (919) 862-2260	CERTIFICATION OF FACSIMILE TRANSMISSION I hereby certify that this paper is being facsimile transmitted to section TC 1600 at the US Patent and Trademark Office at facsimile number (703) 872-9306 on the date shown below.  Marilyn Muñoz January 21, 2004 Date
--	--

RTA01/2148179v1